Connecting via Winsock to STN

Welcome to STN International!  Enter x:x

LOGINID:ssspta1600txm

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

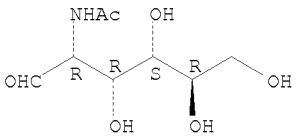
* * * * * * * * * *  Welcome to STN International  * * * * * * * * * *

```
 NEWS  1          Web Page for STN Seminar Schedule - N. America
 NEWS  2  JAN 02  STN pricing information for 2008 now available
 NEWS  3  JAN 16  CAS patent coverage enhanced to include exemplified
                  prophetic substances
 NEWS  4  JAN 28  USPATFULL, USPAT2, and USPATOLD enhanced with new
                  custom IPC display formats
 NEWS  5  JAN 28  MARPAT searching enhanced
 NEWS  6  JAN 28  USGENE now provides USPTO sequence data within 3 days
                  of publication
 NEWS  7  JAN 28  TOXCENTER enhanced with reloaded MEDLINE segment
 NEWS  8  JAN 28  MEDLINE and LMEDLINE reloaded with enhancements
 NEWS  9  FEB 08  STN Express, Version 8.3, now available
 NEWS 10  FEB 20  PCI now available as a replacement to DPCI
 NEWS 11  FEB 25  IFIREF reloaded with enhancements
 NEWS 12  FEB 25  IMSPRODUCT reloaded with enhancements
 NEWS 13  FEB 29  WPINDEX/WPIDS/WPIX enhanced with ECLA and current
                  U.S. National Patent Classification
 NEWS 14  MAR 31  IFICDB, IFIPAT, and IFIUDB enhanced with new custom
                  IPC display formats
 NEWS 15  MAR 31  CAS REGISTRY enhanced with additional experimental
                  spectra
 NEWS 16  MAR 31  CA/CAplus and CASREACT patent number format for U.S.
                  applications updated
 NEWS 17  MAR 31  LPCI now available as a replacement to LDPCI
 NEWS 18  MAR 31  EMBASE, EMBAL, and LEMBASE reloaded with enhancements
 NEWS 19  APR 04  STN AnaVist, Version 1, to be discontinued
 NEWS 20  APR 15  WPIDS, WPINDEX, and WPIX enhanced with new
                  predefined hit display formats
 NEWS 21  APR 28  EMBASE Controlled Term thesaurus enhanced
 NEWS 22  APR 28  IMSRESEARCH reloaded with enhancements
 NEWS 23  MAY 30  INPAFAMDB now available on STN for patent family
                  searching
 NEWS 24  MAY 30  DGENE, PCTGEN, and USGENE enhanced with new homology
                  sequence search option
 NEWS 25  JUN 06  EPFULL enhanced with 260,000 English abstracts
 NEWS 26  JUN 06  KOREAPAT updated with 41,000 documents

 NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
              AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN    Welcome Banner and News Items
 NEWS IPC8     For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that
specific topic.

  All use of STN is subject to the provisions of the STN Customer
  agreement.  Please note that this agreement limits use to scientific
  research.  Use for software development or design or implementation
  of commercial gateways or other similar uses is prohibited and may
  result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 12:26:02 ON 09 JUN 2008
```

```
=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

FILE 'REGISTRY' ENTERED AT 12:26:23 ON 09 JUN 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    6 JUN 2008  HIGHEST RN 1026208-38-7
DICTIONARY FILE UPDATES:   6 JUN 2008  HIGHEST RN 1026208-38-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> e 7512-17-6/rn
E1            1     7512-15-4/RN
E2            1     7512-16-5/RN
E3            1 --> 7512-17-6/RN
E4            1     7512-18-7/RN
E5            1     7512-19-8/RN
E6            1     7512-20-1/RN
E7            1     7512-21-2/RN
E8            1     7512-22-3/RN
E9            1     7512-23-4/RN
E10           1     7512-24-5/RN
E11           1     7512-25-6/RN
E12           1     7512-26-7/RN

=> s e3
L1            1 7512-17-6/RN

=> d l1

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2008 ACS on STN
RN   7512-17-6  REGISTRY
ED   Entered STN:  16 Nov 1984
CN   D-Glucose, 2-(acetylamino)-2-deoxy-  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   D-Glucose, 2-acetamido-2-deoxy- (8CI)
OTHER NAMES:
CN   2-Acetamido-2-deoxy-D-glucose
CN   2-Acetamido-2-deoxyglucose
CN   2-Acetamido-D-glucose
CN   2-Acetylamino-2-deoxy-D-glucose
CN   Acetylglucosamine
CN   D-N-Acetylglucosamine
CN   Marine Sweet
CN   N-Acetyl-2-amino-2-deoxy-D-glucose
CN   N-Acetyl-2-amino-2-deoxyglucose
CN   N-Acetyl-D-glucosamine
CN   N-Acetylglucosamine
CN   NSC 524344
FS   STEREOSEARCH
DR   948887-87-4, 7132-76-5, 134-61-2, 173382-53-1, 98632-70-3
MF   C8 H15 N O6
CI   COM
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO,
```

CA, CABA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM,
EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS,
NAPRALERT, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL,
USPATOLD
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

6962 REFERENCES IN FILE CA (1907 TO DATE)
510 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6966 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 2.46 | 2.67 |

FILE 'CAPLUS' ENTERED AT 12:27:00 ON 09 JUN 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.


FILE COVERS 1907 - 9 Jun 2008 VOL 148 ISS 24
FILE LAST UPDATED: 8 Jun 2008 (20080608/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/legal/infopolicy.html

=> s l1
L2 6966 L1

=> s uti or ((urinary tract infection OR "Urinary system, disease" (L) "infection"))
956 UTI
265 UTIS
1067 UTI
(UTI OR UTIS)
134293 URINARY
149885 TRACT
9059 TRACTS
155681 TRACT
(TRACT OR TRACTS)
311782 INFECTION
89121 INFECTIONS
353990 INFECTION
(INFECTION OR INFECTIONS)

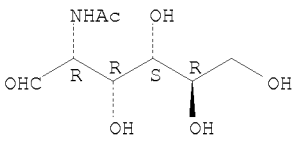
```
          4279 URINARY TRACT INFECTION
                 (URINARY(W)TRACT(W)INFECTION)
        134293 "URINARY"
       2618379 "SYSTEM"
       1415466 "SYSTEMS"
       3535748 "SYSTEM"
                 ("SYSTEM" OR "SYSTEMS")
       1066657 "DISEASE"
        289452 "DISEASES"
       1194891 "DISEASE"
                 ("DISEASE" OR "DISEASES")
          2984 "URINARY SYSTEM, DISEASE"
                 ("URINARY"(W)"SYSTEM"(W)"DISEASE")
        311782 "INFECTION"
         89121 "INFECTIONS"
        353990 "INFECTION"
                 ("INFECTION" OR "INFECTIONS")
          1320 "URINARY SYSTEM, DISEASE" (L) "INFECTION"
L3        5127 UTI OR ((URINARY TRACT INFECTION OR "URINARY SYSTEM, DISEASE"
               (L) "INFECTION"))

=> s (urethritis OR "Urethra" (L) "disease, urethritis")
           568 URETHRITIS
          2739 "URETHRA"
            47 "URETHRAS"
            16 "URETHRAE"
          2764 "URETHRA"
                 ("URETHRA" OR "URETHRAS" OR "URETHRAE")
       1066657 "DISEASE"
        289452 "DISEASES"
       1194891 "DISEASE"
                 ("DISEASE" OR "DISEASES")
           568 "URETHRITIS"
           225 "DISEASE, URETHRITIS"
                 ("DISEASE"(W)"URETHRITIS")
           224 "URETHRA" (L) "DISEASE, URETHRITIS"
L4         568 (URETHRITIS OR "URETHRA" (L) "DISEASE, URETHRITIS")

=> s l2 and l3
L5           4 L2 AND L3

=> s l2 and l4
L6           0 L2 AND L4

=> d bib abd hitstr 1-4 l5
'ABD' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS --------- GI and AB
ALL --------- BIB, AB, IND, RE
APPS -------- AI, PRAI
BIB --------- AN, plus Bibliographic Data and PI table (default)
CAN --------- List of CA abstract numbers without answer numbers
CBIB -------- AN, plus Compressed Bibliographic Data
CLASS ------- IPC, NCL, ECLA, FTERM
DALL -------- ALL, delimited (end of each field identified)
DMAX -------- MAX, delimited for post-processing
FAM --------- AN, PI and PRAI in table, plus Patent Family data
FBIB -------- AN, BIB, plus Patent FAM
IND --------- Indexing data
IPC --------- International Patent Classifications
MAX --------- ALL, plus Patent FAM, RE
PATS -------- PI, SO
SAM --------- CC, SX, TI, ST, IT
SCAN -------- CC, SX, TI, ST, IT (random display, no answer numbers;
              SCAN must be entered on the same line as the DISPLAY,
              e.g., D SCAN or DISPLAY SCAN)
STD --------- BIB, CLASS

IABS -------- ABS, indented with text labels
IALL -------- ALL, indented with text labels
IBIB -------- BIB, indented with text labels
```

```
IMAX -------- MAX, indented with text labels
ISTD -------- STD, indented with text labels

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

HIT --------- Fields containing hit terms
HITIND ------ IC, ICA, ICI, NCL, CC and index field (ST and IT)
              containing hit terms
HITRN ------- HIT RN and its text modification
HITSTR ------ HIT RN, its text modification, its CA index name, and
              its structure diagram
HITSEQ ------ HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
              its structure diagram
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
KWIC -------- Hit term plus 20 words on either side
OCC --------- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field
codes.  For a list of the display field codes, enter HELP DFIELDS at
an arrow prompt (=>).  Examples of formats include: TI; TI,AU; BIB,ST;
TI,IND; TI,SO.  You may specify the format fields in any order and the
information will be displayed in the same order as the format
specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR,
FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC
to view a specified Accession Number.
ENTER DISPLAY FORMAT (BIB):d bib abs hitstr 1-4 l5
'D' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS --------- GI and AB
ALL --------- BIB, AB, IND, RE
APPS -------- AI, PRAI
BIB --------- AN, plus Bibliographic Data and PI table (default)
CAN --------- List of CA abstract numbers without answer numbers
CBIB -------- AN, plus Compressed Bibliographic Data
CLASS ------- IPC, NCL, ECLA, FTERM
DALL -------- ALL, delimited (end of each field identified)
DMAX -------- MAX, delimited for post-processing
FAM --------- AN, PI and PRAI in table, plus Patent Family data
FBIB -------- AN, BIB, plus Patent FAM
IND --------- Indexing data
IPC --------- International Patent Classifications
MAX --------- ALL, plus Patent FAM, RE
PATS -------- PI, SO
SAM --------- CC, SX, TI, ST, IT
SCAN -------- CC, SX, TI, ST, IT (random display, no answer numbers;
              SCAN must be entered on the same line as the DISPLAY,
              e.g., D SCAN or DISPLAY SCAN)
STD --------- BIB, CLASS

IABS -------- ABS, indented with text labels
IALL -------- ALL, indented with text labels
IBIB -------- BIB, indented with text labels
IMAX -------- MAX, indented with text labels
ISTD -------- STD, indented with text labels

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

HIT --------- Fields containing hit terms
```

```
HITIND ------ IC, ICA, ICI, NCL, CC and index field (ST and IT)
              containing hit terms
HITRN ------- HIT RN and its text modification
HITSTR ------ HIT RN, its text modification, its CA index name, and
              its structure diagram
HITSEQ ------ HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
              its structure diagram
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
KWIC -------- Hit term plus 20 words on either side
OCC --------- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field
codes.  For a list of the display field codes, enter HELP DFIELDS at
an arrow prompt (=>).  Examples of formats include: TI; TI,AU; BIB,ST;
TI,IND; TI,SO.  You may specify the format fields in any order and the
information will be displayed in the same order as the format
specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR,
FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC
to view a specified Accession Number.
ENTER DISPLAY FORMAT (BIB):end

=> d bib abs hitstr 1-4 l5

L5   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2003:721755  CAPLUS
DN   139:359732
TI   Physiological studies of Escherichia coli strain MG1655: Growth defects
     and apparent cross-regulation of gene expression
AU   Soupene, Eric; van Heeswijk, Wally C.; Plumbridge, Jacqueline; Stewart,
     Valley; Bertenthal, Daniel; Lee, Haidy; Prasad, Gyaneshwar; Paliy, Oleg;
     Charernnoppakul, Parinya; Kustu, Sydney
CS   Department of Plant and Microbial Biology, University of California,
     Berkeley, CA, 94720-3102, USA
SO   Journal of Bacteriology (2003), 185(18), 5611-5626
     CODEN: JOBAAY; ISSN: 0021-9193
PB   American Society for Microbiology
DT   Journal
LA   English
AB   Escherichia coli strain MG1655 was chosen for sequencing because the few
     mutations it carries (ilvG rfb-50 rph-1) were considered innocuous.
     However, it has a number of growth defects.  Internal pyrimidine starvation
     due to polarity of the rph-1 allele on pyrE was problematic in continuous
     culture.  Moreover, the isolate of MG1655 obtained from the E. coli
     Genetic Stock Center also carries a large deletion around the fnr
     (fumarate-nitrate respiration) regulatory gene.  Although studies on DNA
     microarrays revealed apparent cross-regulation of gene expression between
     galactose and lactose metabolism in the Stock Center isolate of MG1655, this
     was due to the occurrence of mutations that increased lacY expression and
     suppressed slow growth on galactose.  The explanation for apparent
     cross-regulation between galactose and N-acetylglucosamine metabolism was
     similar.  By contrast, cross-regulation between lactose and maltose metabolism
     appeared to be due to generation of internal maltosaccharides in
     lactose-grown cells and may be physiol. significant.  Lactose is of
     restricted distribution: it is normally found together with
     maltosaccharides, which are starch degradation products, in the mammalian
     intestine.  Strains designated MG1655 and obtained from other sources
     differed from the Stock Center isolate and each other in several respects.
     We confirmed that use of other E. coli strains with MG1655-based DNA
     microarrays works well, and hence these arrays can be used to study any
     strain of interest.  The responses to nitrogen limitation of two urinary
     tract isolates and an intestinal commensal strain isolated recently from
     humans were remarkably similar to those of MG1655.
IT   7512-17-6, N-Acetylglucosamine
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (growth on; physiol., growth defects, mutations and apparent
        cross-regulation of gene expression in E. coli strain MG1655 (CGSC
        6300))
RN   7512-17-6  CAPLUS
```

CN D-Glucose, 2-(acetylamino)-2-deoxy- (CA INDEX NAME)

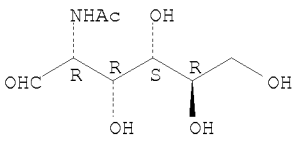
Absolute stereochemistry.




RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:559350 CAPLUS
DN 131:198134
TI Composition of the sugar moiety of Tamm-Horsfall protein in patients with urinary diseases
AU Olczak, T.; Olczak, M.; Kubicz, A.; Dulawa, J.; Kokot, F.
CS Inst. Biochem. Molecular Biol., Univ. Wroclaw, Wroclaw, 50137, Pol.
SO International Journal of Clinical & Laboratory Research (1999), 29(2), 68-74
CODEN: ICLREA; ISSN: 0940-5437
PB Springer-Verlag
DT Journal
LA English
AB The composition of Tamm-Horsfall protein (THP) glycans was examined in the urine of patients with urinary tract infection (group A), glomerulonephritis or interstitial nephritis (group B), and Bartter's syndrome (group C). THP of groups A, B, and C showed decreased amts. of N-acetylgalactosamine; this was reflected in lower reactivity with Phaseolus vulgaris lectin. Amts. of N-acetylglucosamine were reduced in groups A and B. Group A showed lower amts. of galactose and α2,6-linked sialic acid, as determined by reactivity with Datura stramonium lectin and Sambucus nigra lectin. In group C, there was a shift from tetrasialylated glycans towards less-sialylated chains. THP of all patients binds more strongly to IgG1.
IT 7512-17-6, N-Acetylglucosamine
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(composition of the sugar moiety of Tamm-Horsfall protein in patients with urinary diseases)
RN 7512-17-6 CAPLUS
CN D-Glucose, 2-(acetylamino)-2-deoxy- (CA INDEX NAME)

Absolute stereochemistry.




RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:730341 CAPLUS
DN 128:21297
TI N-glycosylated proteins are involved in efficient internalization of Klebsiella pneumoniae by cultured human epithelial cells
AU Fumagalli, Ornella; Tall, Ben D.; Schipper, Christiane; Oelschlaeger, Tobias A.
CS Inst. Molekulare Infektionsbiologie, Wurzburg, D-97070, Germany
SO Infection and Immunity (1997), 65(11), 4445-4451
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English

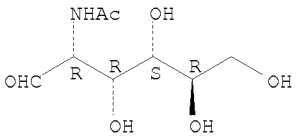
AB Klebsiella pneumoniae obtained from patients with urinary tract infections is able to invade cultured human epithelial cells. The internalization process is dependent upon both microfilaments and microtubules. To better understand the interaction of these invasive bacteria with the host cell receptor(s), bladder, lung, and ileocecal epithelial cells were infected with K. pneumoniae in the presence of various lectins possessing multiple glycan specificities. It was found that the N-acetylglucosamine (GlcNAc)-specific lectins Con A, Datura stramonium agglutinin, and wheat germ agglutinin significantly inhibited the invasion of K. pneumoniae into these cells but did not interfere with the internalization of an invasive strain of Salmonella typhimurium. Conversely, internalization of K. pneumoniae but not S. typhimurium was also significantly inhibited when the bacteria were pretreated with GlcNAc or chitin hydrolyzate, a GlcNAc polymer, prior to the gentamicin invasion assay. Other carbohydrates such as glucose, galactose, mannose, fucose, and N-acetylneuraminic acid had no inhibitory effects on K. pneumoniae uptake. Furthermore, internalization of K. pneumoniae but not S. typhimurium by HCT8 cells was also significantly inhibited when eukaryotic protein glycosylation was interrupted by tunicamycin or when host N-linked surface glycans were removed by pretreatment with N-glycosidase F. These studies suggest that a N-glycosylated protein receptor is involved in the internalization of K. pneumoniae by human epithelial cells in vitro. The results also indicate that internal GlcNAc residues might be a carbohydrate component of the receptor.

IT 7512-17-6, N-Acetyl-D-glucosamine
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(N-glycosylated proteins are involved in efficient internalization of Klebsiella pneumoniae by cultured human epithelial cells)

RN 7512-17-6 CAPLUS

CN D-Glucose, 2-(acetylamino)-2-deoxy- (CA INDEX NAME)

Absolute stereochemistry.




RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1983:519254 CAPLUS

DN 99:119254

OREF 99:18311a,18314a

TI Novel cell-binding activity specific for N-acetyl-D-glucosamine in an Escherichia coli strain

AU Vaisanen-Rhen, Vuokko; Korhonen, Timo K.; Finne, Jukka

CS Dep. Gen. Microbiol., Univ. Helsinki, Helsinki, SF-00170/17, Finland

SO FEBS Letters (1983), 159(1-2), 233-6
CODEN: FEBLAL; ISSN: 0014-5793

DT Journal

LA English

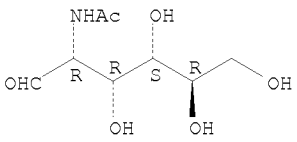
AB E. coli Strains isolated from patients with different levels of urinary tract infection and from healthy persons were tested for their ability to hemagglutinate endo-β-galactosidase-treated human erythrocytes. Among the 104 strains studied, 1 revealed a strong agglutination reaction with the enzyme-treated erythrocytes. From the monosaccharides tested, N-acetyl-D-glucosamine inhibited agglutination most effectively. Orosomucoid and asialo-orosomucoid had no effect on the hemagglutination whereas β-galactosidase-treated asialo-orosomucoid was inhibitory. Apparently, the E. coli strain studied contains a novel cell-binding activity with specificity for terminal N-acetyl-D-glucosamine residues.

IT 7512-17-6
RL: PROC (Process)
(binding of, by Escherichia coli strain, specificity of)

RN 7512-17-6 CAPLUS

CN D-Glucose, 2-(acetylamino)-2-deoxy- (CA INDEX NAME)

Absolute stereochemistry.




```
=> s l2 and ((bacterial infection OR "Infection" (L) "bacterial"))
        292666 BACTERIAL
            70 BACTERIALS
        292713 BACTERIAL
                 (BACTERIAL OR BACTERIALS)
        311782 INFECTION
         89121 INFECTIONS
        353990 INFECTION
                 (INFECTION OR INFECTIONS)
         12069 BACTERIAL INFECTION
                 (BACTERIAL(W)INFECTION)
        311782 "INFECTION"
         89121 "INFECTIONS"
        353990 "INFECTION"
                 ("INFECTION" OR "INFECTIONS")
        292666 "BACTERIAL"
            70 "BACTERIALS"
        292713 "BACTERIAL"
                 ("BACTERIAL" OR "BACTERIALS")
         44722 "INFECTION" (L) "BACTERIAL"
L7          74 L2 AND ((BACTERIAL INFECTION OR "INFECTION" (L) "BACTERIAL"))

=> d 60-74 bib abs l7

L7   ANSWER 60 OF 74  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   1999:750810  CAPLUS
DN   132:33425
TI   Purification and characterization of a natural agglutinin from the serum
     of the hermit crab Diogenes affinis
AU   Murali, Sathasivam; Mullainadhan, Periasamy; Arumugam, Munusamy
CS   Laboratory of Pathobiology, Department of Zoology, University of Madras,
     Madras, 600 025, India
SO   Biochimica et Biophysica Acta, General Subjects (1999), 1472(1-2), 13-24
     CODEN: BBGSB3; ISSN: 0304-4165
PB   Elsevier B.V.
DT   Journal
LA   English
AB   A natural agglutinin from the serum of the hermit crab D. affinis was
     purified to homogeneity by a single-step affinity chromatog. using
     N-acetylglucosamine-coupled Sepharose 6B.  The purified serum agglutinin
     (PSA) showed a strong affinity for rat RBC, and its hemagglutinating (HA)
     activity was specifically dependent on Ca2+ and reversibly sensitive to
     EDTA.  PSA in active from has a mol. mass estimate of 185 kDa and is composed
     of 4 non-identical subunits (51, 49, 42, and 39 kDa) cross-linked by
     interchain disulfide bonds.  The homogeneity of PSA was corroborated by
     immunodiffusion and immunoelectrophoretic analyses using rabbit antiserum
     raised against the agglutinin.  The antibodies in this antiserum appear to
     be specific for RBC-binding sites of the agglutinin mols. as revealed by
     the ability of the antiserum to neutralize HA activities of both whole
     serum and PSA of D. affinis.  In HA-inhibition assays performed with
     several carbohydrates and glycoproteins, PSA showed a distinct and unique
     specificity for acetyl group in carbohydrates independently of the
     presence of this group on C-2 or C-5 and its stereochem. arrangement in
     the axial or equatorial orientation.  Besides, this agglutinin appears to
     recognize the terminal N- and O- acetyl groups in the oligosaccharide
     chain of glycoconjugates.  The HA activity of D. affinis agglutinin was
     also susceptible to inhibition by lipopolysaccharides from diverse
     Gram-neg. bacteria, which might indicate a significant in vivo role of
     this humoral agglutinin in the host immune response against
```

bacterial infections.
RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 61 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1998:674540 CAPLUS
DN 130:79597
TI Histochemical and lectin histochemical studies on nasal mucosa of pigs with or without respiratory diseases
AU Perfumo, Carlos J.; Mores, Nelson; Armocida, Armando D.; Piffer, Itamar A.; Massone, Adriana R.; Itagaki, Shin-ichi
CS Institute of Pathology, Faculty of Veterinary Sciences, La Plata National University, La Plata, 1900, Argent.
SO Journal of Veterinary Medical Science (1998), 60(9), 1021-1023
CODEN: JVMSEQ; ISSN: 0916-7250
PB Japanese Society of Veterinary Science
DT Journal
LA English
AB Histochem. and lectin histochem. examns. were carried out on nasal mucosa of pigs with or without respiratory diseases. Both acid and neutral mucins coexisted in nasal mucosa of normal pigs while acid sialomucins were mainly observed in nasal mucosa of pigs infected with Bordetella bronchiseptica and/or Pasteurella multocida. Lectin histochem. revealed that the nasal epithelial cells of normal pigs were rich in N-acetylgalactosamine, fucose and N-acetyl-glucosamine residues which showed a tendency to disappear in porcine cytomegalovirus infection and to increase in atrophic rhinitis, resp.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 62 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1998:214145 CAPLUS
DN 128:320025
TI Characterization of the carbohydrate moiety of intestinal mucin-type sialoglycoprotein receptors for the K88ac fimbrial adhesin of Escherichia coli
AU Grange, Philippe A.; Erickson, Alan K.; Anderson, Timothy J.; Francis, David H.
CS Department of Veterinary Science, South Dakota State University, Brookings, SD, 57007-1396, USA
SO Infection and Immunity (1998), 66(4), 1613-1621
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English
AB The authors have previously identified two mucin-type sialoglycoproteins from porcine intestinal epithelial cells with approx. mol. masses of 210 (intestinal mucin-type glycoprotein IMTGP-1) and 240 kDa (IMTGP-2) as receptors for the K88ab and K88ac fimbrial adhesions of Escherichia coli. These receptors are detected in intestinal brush border membrane prepns. from pigs with adhesive phenotypes but not from pigs with nonadhesive phenotypes and are postulated to be important determinants of the susceptibility of pigs to K88ab+ and K88ac+ enterotoxigenic E. coli infections. Using exoglycosidase digestion studies, the authors have now determined that β-linked galactose is an important component in the recognition of IMTGP-1 and IMTGP-2 by the K88ac adhesin. In addition, the authors observed a differential distribution of the K88ac adhesin binding activity of IMTGP-1 and IMTGP-2 along the crypt-villus axis, suggesting that receptor activity is dependent on the maturation state of the intestinal epithelial cells. Brush borders from immature intestinal epithelial cells possessed the highest concns. of IMTGP-1 and IMTGP-2 receptor activity, with a progressive decrease in receptor activity as the cells mature. To characterize the differences in the carbohydrate moieties of IMTGP-1 and IMTGP-2, the authors developed a procedure for purifying the receptors, using phenol extraction followed by serial lectin affinity chromatog. Carbohydrate compositional anal. of the purified receptors indicated that the carbohydrate moieties of IMTGP-1 and IMTGP-2 consist of both N- and O-glycans containing galactose, glucose, sialic acid, mannose, N-acetylgalactosamine, N-acetylglucosamine, and fucose. The major difference between the two receptors is that IMTGP-2 contains a higher percentage of monosaccharides (mannose and glucose) commonly found in N-glycans.
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 63 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1998:178974 CAPLUS
DN 128:269300
TI Enzyme immunoassay kit for detecting antibodies to group-specific antigen of group A Streptococcus on the basis of conjugated N-acetylglucosamine and its medical application
AU Briko, N. I.; Bovin, N. V.; Shevelev, B. I.; Dynga, L. O.; Blinnikova, E. I.; Kuksyuk, P. P.; Myasoedova, S. I.; Ambrosov, I. V.; Filatov, N. N.
CS Inst. Bioorg. Khim., Mosk. Med. Akad. im. Sechenova, Moscow, Russia
SO Klinicheskaya Laboratornaya Diagnostika (1997), (9), 43-46
CODEN: KLDIES; ISSN: 0869-2084
PB Meditsina
DT Journal
LA Russian
AB Enzyme immunoassay kit has been created for detecting antibodies to group A Streptococcus, based on N-acetylglucosamine. N-acetylglucosamine was selected as the group-specific determinant due to the structure of group A Streptococcus polysaccharide, in which this monosaccharide residue is lateral to the main polysaccharide chain and hence more available for antibodies. Water-soluble polyacrylamide is the carrier in this kit, for this carrier is stable and not prone to nonspecific reaction with proteins. In addition, the synthesis of polyacrylamide conjugates ensures reproducible results. Use of this kit permits the identification of group A streptococcal etiol. of the disease and thus carry out appropriate therapy; moreover, it helps predict the outcome of an acute streptococcal infection and detect the post-streptococcal complications in the early period of the disease.

L7 ANSWER 64 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:730341 CAPLUS
DN 128:21297
TI N-glycosylated proteins are involved in efficient internalization of Klebsiella pneumoniae by cultured human epithelial cells
AU Fumagalli, Ornella; Tall, Ben D.; Schipper, Christiane; Oelschlaeger, Tobias A.
CS Inst. Molekulare Infektionsbiologie, Wurzburg, D-97070, Germany
SO Infection and Immunity (1997), 65(11), 4445-4451
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English
AB Klebsiella pneumoniae obtained from patients with urinary tract infections is able to invade cultured human epithelial cells. The internalization process is dependent upon both microfilaments and microtubules. To better understand the interaction of these invasive bacteria with the host cell receptor(s), bladder, lung, and ileocecal epithelial cells were infected with K. pneumoniae in the presence of various lectins possessing multiple glycan specificities. It was found that the N-acetylglucosamine (GlcNAc)-specific lectins Con A, Datura stramonium agglutinin, and wheat germ agglutinin significantly inhibited the invasion of K. pneumoniae into these cells but did not interfere with the internalization of an invasive strain of Salmonella typhimurium. Conversely, internalization of K. pneumoniae but not S. typhimurium was also significantly inhibited when the bacteria were pretreated with GlcNAc or chitin hydrolyzate, a GlcNAc polymer, prior to the gentamicin invasion assay. Other carbohydrates such as glucose, galactose, mannose, fucose, and N-acetylneuraminic acid had no inhibitory effects on K. pneumoniae uptake. Furthermore, internalization of K. pneumoniae but not S. typhimurium by HCT8 cells was also significantly inhibited when eukaryotic protein glycosylation was interrupted by tunicamycin or when host N-linked surface glycans were removed by pretreatment with N-glycosidase F. These studies suggest that a N-glycosylated protein receptor is involved in the internalization of K. pneumoniae by human epithelial cells in vitro. The results also indicate that internal GlcNAc residues might be a carbohydrate component of the receptor.
RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 65 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1996:200816 CAPLUS
DN 124:285738

OREF 124:52887a,52890a
TI Role of cell-associated N-acetyl-D-glucosamine specific hemagglutinin in the adhesion of Vibrio cholerae O1 to rabbit intestinal epithelial cells in vitro
AU Sasmal, D.; Guhathakurta, B.; Bhattacharya, S. K.; Pal, C. R.; Datta, A.
CS National Institute of Cholera and Enteric Diseases P-33, C.I.T. Road, Scheme XM, Calcutta, 700 010, India
SO FEMS Immunology and Medical Microbiology (1996), 13(2), 101-5
CODEN: FIMIEV; ISSN: 0928-8244
PB Elsevier
DT Journal
LA English
AB Previously a N-acetyl-D-glucosamine specific cell-associated hemagglutinin (HA) had been purified from a Vibrio cholerae O1 strain. This study documents the role of this purified HA as an adhesin of V. cholerae O1. A significant inhibition in the adhesion of V. cholerae O1 bacterial cells to isolated rabbit intestinal brush borders (RIBB) was observed when the latter were pretreated with purified HA in ELISA. Antibody raised against purified HA and Fab (IgG) fragment of this serum inhibited adhesion of the bacteria to isolated rabbit intestinal epithelial cells (RIEC). V. cholerae O1 (both Ogawa and Inaba serovars) showed less adherence to isolated RIEC of animals immunized with the purified HA. Patients convalescing from V. cholerae O1 infection showed high ELISA titers against the purified HA indicating that it is expressed in the host during the disease process.

L7 ANSWER 66 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1992:639828 CAPLUS
DN 117:239828
OREF 117:41365a,41368a
TI Lectins as anti-infective agents
IN Pusztai, Arpad Janos
PA Rowett Research Institute, UK
SO PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9210204 | A1 | 19920625 | WO 1991-GB2236 | 19911216 |
| | W: AU, CA, FI, JP, NO, US | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE | | | | |
| | CA 2098305 | A1 | 19920615 | CA 1991-2098305 | 19911216 |
| | AU 9190668 | A | 19920708 | AU 1991-90668 | 19911216 |
| | EP 561912 | A1 | 19930929 | EP 1992-900831 | 19911216 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE | | | | |
| | JP 06504533 | T | 19940526 | JP 1991-502133 | 19911216 |
| PRAI | GB 1990-27185 | A | 19901214 | | |
| | WO 1991-GB2236 | A | 19911216 | | |

AB A nontoxic lectin or lectin-carrying entity from plants is used for the prevention or treatment of bacterial infections and parasite infestation in animals. The lectins can be orally administered or fed to livestock to prevent infections. Antibacterial effects of Phaseolus vulgaris agglutinin and Galanthus nivalis agglutinin against Escherichia coli were tested with rats.

L7 ANSWER 67 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1991:530153 CAPLUS
DN 115:130153
OREF 115:22177a,22180a
TI Airway adherence of Pseudomonas aeruginosa: mucoexopolysaccharide binding to human and bovine airway proteins
AU Hata, J. Steven; Fick, Robert B., Jr.
CS Coll. Med., Univ. Iowa, Iowa City, IA, 52242, USA
SO Journal of Laboratory and Clinical Medicine (1991), 117(5), 410-22
CODEN: JLCMAK; ISSN: 0022-2143
DT Journal
LA English
AB The ability of P. aeruginosa (PA) to adhere to cells of the upper and lower airways is considered the initial step in its colonization and subsequent infection. Many potential adhesins exist, but few eukaryote receptors have been reported. This study evaluates the

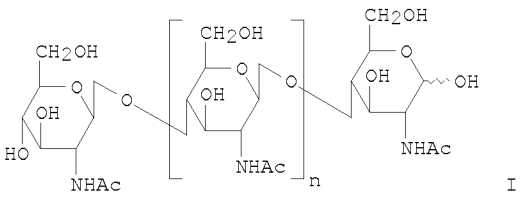
adherence of PA and the well-recognized adhesin mucoexopolysaccharide, of the mucoid variant, to tracheal epithelial cells and airway secretions. A number of tools were used to systematically examine this process, each in increasing detail. SEM of infected tracheal cell monolayers showed that although nonmucoid PA adhered most often as individual organisms, mucoid strains frequently were adherent in the form of clusters of microcolonies. Partially purified mucoexopolysaccharide was itself adherent to the tracheal cell monolayers. More quant. studies of 14C-labeled PA adherence to tracheal cell monolayers demonstrated that (1) bacterial adherence was temperature dependent; (2) mucoid PA was more adherent than nonmucoid PA; (3) proteinase treatment of the intact monolayers increased adherence of mucoid PA; and (4) adherence of nonmucoid PA was partially inhibited by pretreatment with N-acetylglucosamine, a normal constituent of airway mucus. These observations suggest that N-acetylglucosamine may play a role in the epithelial cell receptor for ligands on the surface of nonmucoid strains of PA. Pretreatment of mucoid PA with N-acetylglucosamine, D-arabinose, D-mannose, or N-acetylneuraminic acid did not affect adherence. Partially purified proteins isolated from the apical plasma membrane of bovine tracheal epithelial cells probed in a Western anal. with the 125I-labeled PA mucoexopolysaccharide revealed two binding proteins of 45,000 mol. weight and 104,000 mol. weight Human airway secretions of patients with chronic PA infection were screened by the dot blot technique and demonstrated selective binding of mucoexopolysaccharide ligand. Western anal. of these biol. important secretions revealed that PA mucoexopolysaccharide bound to a 65,000 mol. weight protein in airway secretions of infected individuals. This glycoprotein is similar to a previously described cell receptor for bacterial type 1 fimbriae.

L7 ANSWER 68 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1991:17359 CAPLUS
DN 114:17359
OREF 114:2957a,2960a
TI The role of lectins in respiratory infections
AU Luther, P.; Reutgen, H.; Noack, K.; Sehrt, I.; Flemming, C.
CS Res. Inst. Lung Dis., Berlin-Buch, 1115, Ger. Dem. Rep.
SO Lectins: Biology, Biochemistry, Clinical Biochemistry (1990), 7, 287-90
CODEN: LBBBD5; ISSN: 0723-8878
DT Journal
LA English
AB Plant and bacterial lectins may play an important role in decreasing of respiratory infections. The potency of both to prevent lethal infections with Streptococcus pneumoniae ATCC 6301 was examined The lectin from Triticum vulgare (WGA) applied orally was able to activate phagocytosis and to kill alveolar macrophages in vivo. The activation of resistance mechanisms against a normally lethal infection of S. pneumoniae in mice was strongly increased (2-5 times) by inoculation with a new polyvalent bacterial vaccine Infectvac when compared to unvaccinated specimens. Using the same infection model the important role of bacterial lectins for infectious diseases was tested. Blockage of the combining site for the bacterial lectin of S. pneumoniae, by intranasal application of N-acetylglucosamine (the specific carbohydrate for the lectin), prevented a lethal infection with S. pneumoniae 3-fold greater than PBS or using nonlectin relevant carbohydrates. Therefore, blocking the lectin receptor with specific carbohydrates might also be of clin. relevance to prevent acute respiratory infections.

L7 ANSWER 69 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1990:160931 CAPLUS
Correction of: 1987:536244
DN 112:160931
Correction of: 107:136244
OREF 112:27187a,27190a
TI Production of water-soluble chitin oligomers
IN Nishimura, Tatsumi; Eto, Eiichi; Yamada, Toyofumi
PA Ihara Chemical Industry Co., Ltd., Japan
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

| | | | | | |
|---|---|---|---|---|---|
| PI | EP 226452 | A2 | 19870624 | EP 1986-309609 | 19861210 |
| | EP 226452 | A3 | 19880803 | | |
| | EP 226452 | B1 | 19921119 | | |
| | R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE | | | | |
| | JP 62138496 | A | 19870622 | JP 1985-278688 | 19851211 |
| | JP 01053877 | B | 19891115 | | |
| | CA 1297832 | C | 19920324 | CA 1986-524841 | 19861209 |
| | DK 8605928 | A | 19870612 | DK 1986-5928 | 19861210 |
| | FI 8605024 | A | 19870612 | FI 1986-5024 | 19861210 |
| | FI 80713 | B | 19900330 | | |
| | FI 80713 | C | 19900710 | | |
| | NO 8604982 | A | 19870612 | NO 1986-4982 | 19861210 |
| | NO 167747 | B | 19910826 | | |
| | NO 167747 | C | 19911204 | | |
| | ES 2043604 | T3 | 19940101 | ES 1986-309609 | 19861210 |
| | US 4804750 | A | 19890214 | US 1986-940358 | 19861211 |
| PRAI | JP 1985-278688 | A | 19851211 | | |

GI



I

AB The title oligomers I (n = 2-4), useful as immune adjuvants against bacterial and fungal infections and the growth of tumors (no data), are prepared by hydrolyzing finely ground chitin with an amount of concentrated hydrohalic acid containing 1.5-6 mol hydrogen halide per 100 g chitin, while irradiating with ultrasonic waves and mech. stirring. A reactor was charged with 100 g of finely ground chitin (particle size ≥16 mesh; from Chionecetes japonicus) and 400 mL of 12N HCl, the mixture was irradiated with 300 W of 48 kHz untrasonic irradiation and agitated with mech. stirring for 15 min at <30°, the resulting homogeneous reaction mixture was further agitated at 40° for 2 h while ultrasonic radiation was continued, the hydrolyzed reaction mixture neutralized to pH 7 with aqueous NaOH, cooled, filtered, desalted by passing through a column (100 cm long, 10 cm in diameter) of Sephadex -25, and the combined effluent fractions were freeze-dried to give 36 g of a solid mixture comprising I (n = 0-4) and N-acetylglucosamine. This mixture was subjected to high-pressure liquid chromatog., producing I (n = 4) 3.10, I (n = 3) 7.6, and I (n = 2) 8.1 g.

L7 ANSWER 70 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1989:152366 CAPLUS
DN 110:152366
OREF 110:25169a,25172a
TI Lectins and their role in a new polyvalent bacterial vaccine against ARI
AU Luther, P.; Noack, K.; Reutgen, H.
CS Res. Inst. Lung Dis., Berlin-Buch, 1115, Ger. Dem. Rep.
SO Zentralblatt fuer Bakteriologie, Mikrobiologie und Hygiene, Series A: Medical Microbiology, Infectious Diseases, Virology, Parasitology (1988), 270(1-2), 16-21
CODEN: ZBMPEJ; ISSN: 0176-6724
DT Journal
LA English
AB The potency of the polyvalent bacterial vaccine (Infectvac) to prevent lethal infections with Streptococcus pneumoniae ATCC 6301 was examined NMRI-mice were protected 2-5 times better than untreated controls. Using the same infection model, the important role of bacterial lectins for infectious diseases was demonstrated. Blocking the combining site of the bacterial lectin of S. pneumoniae by intranasal application of N-acetylglucosamine (the specific carbohydrate for the lectin) was able to prevent a lethal infection with S. pneumoniae 3-times better than controls. Therefore, blocking the lectin receptor with specific carbohydrates might

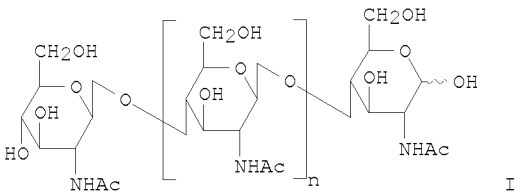
also be of clin. relevance to prevent acute respiratory infections (ARI).

L7 ANSWER 71 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1988:126674 CAPLUS
DN 108:126674
OREF 108:20665a,20668a
TI A 63 KDa toxic polypeptide from Bacillus thuringiensis subsp. kurstaki (HD-263): effects on several lepidopteran cell lines
AU McCarthy, William J.; Aronson, John N.; Labenberg, Jim
CS Dep. Entomol., Pennsylvania State Univ., University Park, PA, 16802, USA
SO In Vitro Cellular & Developmental Biology (1988), 24(1), 59-64
CODEN: ICDBEO; ISSN: 0883-8364
DT Journal
LA English
AB An electrophoretically homogeneous 63 kilodalton (KDa) polypeptide derived from the protoxin of B. thuringiensis subsp. kurstaki; (HD-263) caused lysis of cells from the lepidopteran cell lines TN368, IPLB-HZ1075, LD652Y, and SF21AE. The extent of cytolysis among the different cell cultures varied according to the incubation milieu, the polypeptide, and the particular cell culture studied. Preincubation of the polypeptide with either the amino sugars galactosamine, mannosamine, glucosamine, or their N-acetyl derivs. prevented cytolysis to a varying extent. Derivs. of galactose were more effective than those of mannose, followed by those of glucose. The amino sugars inhibited more efficiently than the N-acetyl derivs. No inhibition was detected using the parent sugars. A baculovirus originally isolated from the lepidopteran Autographa californica was grown in TN368 cells and the extracellular virus (ECV) preincubated with varying concns. of the polypeptide before assay. A concentration of 5 μg/mL reduced viral infectivity 99% when assayed on TN368 cells. Evidently at least some B. thuringiensis toxins may utilize specific cell-surface glycoconjugates for initiation of their toxic action and the nos. and types of receptors may vary with the specific cell line. Also, reduction of baculovirus ECV infectivity by toxic polypeptide indicates binding to a cell-surface glycoconjugate essential for initiation of infection, whether it is the normal cell receptor or a virus-coded glycoconjugate.

L7 ANSWER 72 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1987:536244 CAPLUS
DN 107:136244
OREF 107:22005a,22008a
TI Production of water-soluble chitin oligomers
IN Nishimura, Tatsumi; Eto, Eiichi; Yamada, Toyofumi
PA Ihara Chemical Industry Co., Ltd., Japan
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DT Patent
LA English

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI EP 226452 A2 | | 19870624 | EP 1986-309609 | 19861210 |
| R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE | | | | |
| PRAI JP 1985-278688 | | 19851211 | | |

GI



I

AB The title oligomers I (n = 2-4), useful as immune adjuvants against bacterial and fungal infections and the growth of tumors (no data), are prepared by hydrolyzing finely ground chitin with an amount of concentrated hydrohalic acid containing 1.5-6 mol hydrogen halide per 100 g chitin, while irradiating with ultrasonic waves and mech. stirring. A reactor was

charged with 100 g of finely ground chitin (particle size ≥16 mesh; from Chionecetes japonicus) and 400 mL of 12N HCl, the mixture was irradiated with 300 W of 48 kHz ultrasonic irradiation and agitated with mech. stirring for 15 min at <30°, the resulting homogeneous reaction mixture was further agitated at 40° for 2 h while ultrasonic radiation was continued, the hydrolyzed reaction mixture neutralized to pH 7 with aqueous NaOH, cooled, filtered, desalted by passing through a column (100 cm long, 10 cm in diameter) of Sephadex G-25, and the combined effluent fractions were freeze-dried to give 36 g of a solid mixture comprising I (n = 0-4) and N-acetylglucosamine. This mixture was subjected to high-pressure liquid chromatog., producing I (n = 4) 3.10, I (n = 3) 7.6, and I (n = 2) 8.1 g.

L7 ANSWER 73 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1985:575309 CAPLUS
DN 103:175309
OREF 103:28139a,28142a
TI Kinetic and chemical analyses of the biologic significance of lipoteichoic acids in mediating adherence of serotype III group B streptococci
AU Nealon, Timothy J.; Mattingly, Stephen J.
CS Health Sci. Cent., Univ. Texas, San Antonio, TX, 78284, USA
SO Infection and Immunity (1985), 50(1), 107-15
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
AB The mechanism(s) involved in the binding of lipoteichoic acid (LTA), isolated from virulent, asymptomatic, or avirulent serotype III strains of group B streptococci, to human embryonic epithelial cells (HEC), human fetal epithelial cells (HFC), and human adult buccal epithelial cells was investigated. It was determined that the binding of purified [3H]LTA to human adult buccal epithelial cells differed from the binding to HEC and HFC. LTA from all group B streptococcus strains bound to human adult buccal epithelial cells in a similar manner and was enhanced by the lipid portion of the polymer; in contrast, [3H]LTA binding to HEC and HFC was mediated by hydrophobic as well as specific interactions due to the glycerolphosphate backbone of LTA. Binding avidity of the LTAs to HEC and HFC varied depending on the bacterial strain. Polymers from asymptomatic and avirulent strains were easily dissociated from cell surfaces with unlabeled virulent LTA through competitive interactions; however, 10-fold greater levels of the same material were required to displace virulent [3H]LTA from HEC and HFC surfaces. These observed differences in binding avidity were shown to be due to longer LTA chains (30 to 35 glycerolphosphate units) in virulent strains when compared with LTA chains (10 to 12 glycerolphosphate units) of asymptomatic and avirulent strains. Thus, LTA appears to enhance the ability of virulent group B streptococci to bind to HEC and HFC with stronger avidity by virtue of the increased length of the cell-associated polymers synthesized by these strains. Mild enzymic treatment of HEC and HFC with trypsin or periodate abolished LTA binding, which suggests the presence of a certain glycoprotein receptor(s) for LTA which does not appear to be present on human adult buccal epithelial cells. These data may therefore partially explain the increased susceptibility of newborn infants to group B streptococcal infections.

L7 ANSWER 74 OF 74 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1983:32822 CAPLUS
DN 98:32822
OREF 98:5149a,5152a
TI Specificity of Japanese horseshoe crab lectin prepared by chitin adsorbent
AU Matsumoto, I.; Yamaguchi, H.; Seno, N.; Shibata, Y.; Okuyama, T.
CS Fac. Sci., Ochanomizu Univ., Tokyo, 112, Japan
SO Chitin Chitosan, Proceeding Int. Conf., 2nd (1982), 165-70. Editor(s): Hirano, Shigehiro; Tokura, Seiichi. Publisher: Jpn. Soc. Chitin Chitosan, Tottori, Japan.
CODEN: 48XAAL
DT Conference
LA English
AB The lectin of the hemolymph of the Japanese horseshoe crab (Tachypleus tridentatus agglutinin, TTA) was purified by specific absorption on a chitin column and subsequent specific elution with N-acetyl-D-glucosamine. The fluorescence of TTA, which was centered at 335 nm and was characteristic of the tryptophanyl residue, was enhanced upon interaction with specific sugars. The association consts. of TTA with specific sugars,

which were calculated from the changes in intensities of fluorescence difference spectra induced by the sugars, were in good agreement with the results of hemagglutination inhibition test. N-Acetylneuraminic acid and N-acetylmuramic acid had the highest association constant among monosaccharides, and colominic acid and hyaluronic acid had the highest constant among polysaccharides tested. The results indicate that TTA strongly recognizes the N-acetyl group and probably the carboxyl group in the sugar mol. TTA agglutinated not only human erythrocytes but also Micrococcus lysodeikticus. Despite the lack of bacteriolysis activity as lysozyme, TTA may have an immunol. role against the bacterial infection.

```
=> s chitin and l3
         17888 CHITIN
           322 CHITINS
         17904 CHITIN
                 (CHITIN OR CHITINS)
L8           3 CHITIN AND L3

=> s chitin and l4
         17888 CHITIN
           322 CHITINS
         17904 CHITIN
                 (CHITIN OR CHITINS)
L9           0 CHITIN AND L4

=> d bib abs 1-3 l8

L8   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2005:1290207  CAPLUS
DN   144:27596
TI   Taurolidine formulations for antimicrobial protection against bacterial
     biofilm formation
IN   Polaschegg, Hans-Dietrich
PA   Austria
SO   PCT Int. Appl., 75 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     --------------      ----   --------    --------------------    --------
PI   WO 2005115357        A2    20051208    WO 2005-EP5438          20050516
     WO 2005115357        A3    20060511
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
             LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
             NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
             SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
             ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
     JP 2007537200         T     20071220    JP 2007-512125          20050516
PRAI US 2004-571272P       P     20040514
     WO 2005-EP5438        W     20050516
AB   Localized bacterial infection can be treated by locally applying e.g.,
     taurolidine gels, suspensions or thixotropic gels to the infection. A
     device for insertion into the body comprises taurolidine to render the
     device infection resistant. A method for treating blood, comprises
     removing blood from the body, treating the blood with taurolidine, and
     returning the treated blood.

L8   ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2000:84585  CAPLUS
DN   132:127741
TI   Suppository formulations comprising anionic polysaccharide
IN   Santar, Ivan; Kiss, Frantisek; Briestensky, Jiri
PA   Alpenstock Holdings Limited, Ire.
```

SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 8

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000004877 | A1 | 20000203 | WO 1999-IE71 | 19990721 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 9950621 | A | 20000214 | AU 1999-50621 | 19990721 |
| ES 2216543 | T3 | 20041016 | ES 1999-935016 | 19990721 |
| ZA 2001000514 | A | 20010829 | ZA 2001-514 | 20010118 |
| PRAI IE 1998-594 | A | 19980721 | | |
| IE 1998-595 | A | 19980721 | | |
| IE 1998-596 | A | 19980721 | | |
| IE 1998-597 | A | 19980721 | | |
| IE 1998-598 | A | 19980721 | | |
| IE 1998-599 | A | 19980721 | | |
| WO 1999-IE71 | W | 19990721 | | |

AB A suppository formulation for rectal or vaginal administration includes a biocompatible anionic polysaccharide material wherein at least 5 % of the basic structural units of the polysaccharide are glucuronic acid. Oxidized linters were hydrolyzed and treated with gelatins to obtain an intermol. complex. The complex was mixed with gelatins, glycerol, propylene glycol, nitrofurantoin, and chlorhexidine and the resulting mixture was cast into a blister foil serving as the suppository packaging.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:730341 CAPLUS
DN 128:21297
TI N-glycosylated proteins are involved in efficient internalization of Klebsiella pneumoniae by cultured human epithelial cells
AU Fumagalli, Ornella; Tall, Ben D.; Schipper, Christiane; Oelschlaeger, Tobias A.
CS Inst. Molekulare Infektionsbiologie, Wurzburg, D-97070, Germany
SO Infection and Immunity (1997), 65(11), 4445-4451
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English

AB Klebsiella pneumoniae obtained from patients with urinary tract infections is able to invade cultured human epithelial cells. The internalization process is dependent upon both microfilaments and microtubules. To better understand the interaction of these invasive bacteria with the host cell receptor(s), bladder, lung, and ileocecal epithelial cells were infected with K. pneumoniae in the presence of various lectins possessing multiple glycan specificities. It was found that the N-acetylglucosamine (GlcNAc)-specific lectins Con A, Datura stramonium agglutinin, and wheat germ agglutinin significantly inhibited the invasion of K. pneumoniae into these cells but did not interfere with the internalization of an invasive strain of Salmonella typhimurium. Conversely, internalization of K. pneumoniae but not S. typhimurium was also significantly inhibited when the bacteria were pretreated with GlcNAc or chitin hydrolyzate, a GlcNAc polymer, prior to the gentamicin invasion assay. Other carbohydrates such as glucose, galactose, mannose, fucose, and N-acetylneuraminic acid had no inhibitory effects on K. pneumoniae uptake. Furthermore, internalization of K. pneumoniae but not S. typhimurium by HCT8 cells was also significantly inhibited when eukaryotic protein glycosylation was interrupted by tunicamycin or when host N-linked surface glycans were removed by pretreatment with N-glycosidase F. These studies suggest that a N-glycosylated protein receptor is involved in the internalization of K. pneumoniae by human epithelial cells in vitro. The results also indicate that internal GlcNAc residues might be a carbohydrate component of the receptor.

```
RE.CNT  44    THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> d his

     (FILE 'HOME' ENTERED AT 12:26:02 ON 09 JUN 2008)

     FILE 'REGISTRY' ENTERED AT 12:26:23 ON 09 JUN 2008
                E 7512-17-6/RN
L1              1 S E3

     FILE 'CAPLUS' ENTERED AT 12:27:00 ON 09 JUN 2008
L2           6966 S L1
                E URINARY TRACT INFECTION+ALL/CT
L3           5127 S UTI OR ((URINARY TRACT INFECTION OR "URINARY SYSTEM, DISEASE"
                E URETHRITIS+ALL/CT
L4            568 S (URETHRITIS OR "URETHRA" (L) "DISEASE, URETHRITIS")
L5              4 S L2 AND L3
L6              0 S L2 AND L4
                E BACTERIA+ALL/CT
                E BACTERIAL INFECTION+ALL/CT
L7             74 S L2 AND ((BACTERIAL INFECTION OR "INFECTION" (L) "BACTERIAL"))
L8              3 S CHITIN AND L3
L9              0 S CHITIN AND L4
```